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THE NATIONAL ASSOCIATION OF COST ACCOUNTANTS
NEW YORK CITY

OUT OF PRINT

N. A. C. A. BULLETIN

Vol. XVII, No. 2 September 15, 1935

IN THREE SECTIONS

Section I

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IN THIS ISSUE

The Control of Marketing Costs Through the Use of Standards, by Albert W. Frey..... 55

Control and Distribution of Selling Costs, by Walter F. Titus..... 78

This Bulletin is published semi-monthly by the National Association of Cost Accountants, 385 Madison Avenue, New York. Subscription price, $10.00 per year. Entered at the Post Office, New York, N. Y., as second-class matter August 28, 1925, under the Act of March 3, 1879.

EDITORIAL DEPARTMENT NOTE

Cost accounting has two major functions: it furnishes unit product costs for price setting purposes and it provides the means for the control of costs. Both of these phases of cost accounting have been rather highly developed in the field of production costs, but in the field of distribution or marketing costs the application of cost accounting technique has not given comparable results either for price setting or cost control purposes.

Cost accounting will not have reached its full usefulness for price setting purposes until a technique is provided for determining with reasonable accuracy the cost to make and sell a unit of product. To combine all marketing costs and apply them to units of products at a uniform rate per dollar of sales or per dollar of manufacturing cost, as was done under many N. R. A. codes, is not cost accounting. There is need for considerable study in this field.

In the field of the control of distribution costs more progress has been made, but even here the problem of developing proper units for the control of marketing costs has prevented as extensive developments as in the field of production cost control where more tangible units for control purposes are available. In the first article in this issue of the Bulletin Albert W. Frey, Assistant Dean of the Amos Tuck School of Administration and Finance, discusses the second phase of cost accounting for distribution and points out the value of standards in the control of marketing costs. Since his graduation from Dartmouth in 1920 and from the Amos Tuck School in 1921, Professor Frey has been teaching economics, marketing, retailing and advertising at the Amos Tuck School where he is at present Professor of Marketing and Assistant Dean. Professor Frey is the author of numerous articles published in trade papers.

In our second article Walter F. Titus deals largely with the first phase of cost accounting for Marketing. He presents several thought-provoking questions on the subject of distributing and allocating marketing costs. Mr. Titus has been connected with the International Business Machines Corp. since 1909, serving as repair man, branch manager and as district manager in Omaha, Buffalo and Detroit. In 1931 he was called to the I. B. M. plant in Endicott, N. Y., to become General Service Manager, and in 1933 was made Assistant to the President in charge of all manufacturing. Mr. Titus has been a member of N. A. C. A. for many years and is a frequent speaker before our chapters.

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NATIONAL ASSOCIATION OF
COST ACCOUNTANTS

SEPTEMBER 15, 1935

THE CONTROL OF MARKETING COSTS THROUGH THE USE OF STANDARDS

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IT WOULD be an affront to the intelligence of any group of business men today to dwell for long on the importance of controlling marketing costs, those costs incurred in connection with the securing and filling of orders. Although control of this type of cost did not become an object of serious study until fairly recently, much later than did the control of manufacturing costs, alert executives now accept it as a necessity. There exists, however, considerable difference of opinion as to the extent to which control can be made effective and worthwhile and as to the form which it should take. Consequently, some concerns have gone much farther than others in the direction of establishing real control over marketing costs; and among those which have taken such steps, there is considerable disparity in the methods used. Such a condition is not unusual in a field the exploration of which has been carried on for only a relatively few years; and in fact, as may be inferred from the remarks which follow, there will probably always be a rather wide variety of systems and methods designed to keep marketing costs within desired limits.

Expense Control and Cost Reduction

Proper control of selling and distribution costs necessitates the provision of some means whereby such costs will tend to be incurred only where, and to the amount, they should be incurred. While the introduction of methods for controlling these costs may lead to a decrease in them, it should not be inferred, as it too often is, that control is synonymous with the lowering of costs. It is obvious that there is a point above which they should not mount. If one thinks in terms of selling activities instead of costs, this fact becomes readily apparent. To cut out all selling activities and thus all selling expense would mean the complete elimination of sales.

From the point of view of the extent to which they control costs, business concerns may be classified in four groups:

I. Those which have no control of any sort.
II. Those which have only an indirect control of costs, arrived at by control of selling and distributing activities.
III. Those which, while they may have the indirect control just noted, in addition effect control through the use of a budget.
IV. Those which have control through the use of functional standard costs. These concerns will usually also have the type of control mentioned in the two preceding classes.

Concerns of the First Two Types

Probably it would be difficult to find many businesses of the first class, that is, businesses which have no control whatsoever over marketing costs. Undoubtedly there are many concerns in the second group, concerns which do not have any budget or formal set of standards for controlling marketing costs but which have an informal or indirect control through the careful planning and supervision of the activities which give rise to the costs. Concerns in this category would carry on such activities as the routing of salesmen, the listing of specific customers and prospects to be called on by salesmen, the devising of the best compensation scheme according to the circumstances involved, the training of salesmen in the most effective way of presenting the sales story, the determination of the territories in which branch houses and public warehouses are to be used and so on.

While the defining of the most desirable ways of carrying on the marketing function goes a long way in determining what marketing costs are likely to be and in a sense controls them, it does not necessarily set them exactly. Therefore it does not establish a standard against which subsequent actual costs may be measured. It might be argued, and correctly so, that in such cases there really is a standard—the past records of the concern. The planning of such distribution activities as those mentioned above would be based largely upon what the accounting records disclosed regarding the sales volume, expense and profitability, during preceding periods, of products, outlets, salesmen, territories and so on. This paper is largely concerned, however, with carefully predetermined standards for future operations which can be used to determine the relative *efficiency* with which marketing activities are carried on. Only by comparison with an expected level of accomplishment can performance really be measured at a given time. Last year's results or the average of results over a period of years do not con-

stitute reasonable goals or achievements for the activities of the coming year. Unless all the influencing conditions are the same in two instances, comparison of performances may be meaningless. In attempting to decide whether a performance is efficient, without standards which take into account current conditions, one must really go through the process of setting up standards in one's mind. An apparent improvement in current performance over that of a year ago may in fact not present a true picture in that, relative to the opportunity presented, the past performance may be the better one.

It should be emphasized at this point that there is a distinction between determining *efficiency* and determining *profitability*. It is possible to conduct a business with 100% efficiency and yet unprofitably for a time, just as it is possible to conduct a business profitably but inefficiently. The cost figures which one derives from current records are useful in determining both profitability and efficiency, but the former use is much more widespread than the latter.

Budgetary Control of Distribution Costs

The earlier, and currently more common, type of standard for controlling marketing costs and determining efficiency is what may be called the budget standard. Any figure in a budget constitutes such a standard. It is a predetermined figure against which an actual result presumably is to be measured. This is the type of control used by concerns in Class III above. Just as sales managers may not recognize the importance of standard cost systems, so accountants may not give enough sympathetic attention to volume standards, such as we find in sales budgets. If this is so, it is unfortunate, for accountants can be of inestimable aid in the working out of such standards.

Since we are interested for the present in distribution activities only, we will confine our discussion to the sales and sales expense budget figures or standards. And since our major interest is in another type of standard, less common and more effective for determining relative efficiency and which will be described later, this discussion of budget standards will be brief and suggestive rather than detailed and definitive. The sole reason for giving it more than passing mention is that there are still many contro-

versial points in connection with the drawing up of budgets and a brief review of the subject, from the sales control point of view, may not be without interest.

Importance of the Sales Estimate

The most important figure in the budget and the most difficult to derive is the sales estimate. Upon its accuracy depends the accuracy and usefulness of practically all other figures or standards in the budget. If actual sales veer far from the estimate, some of the other predetermined figures, particularly those for production, have little meaning and must be revised, a step which can easily be taken too late. The once popular method of estimating sales by an arbitrary percentage to the figure for the past year has been abandoned by most companies for obvious reasons. Certainly the simplicity of this method, rather than any claim to its accuracy, is all that can recommend it. It should not be inferred that other methods will produce absolute accuracy, for certainly this is not the case; but the perfect forecast can be more nearly approached by careful study than by making offhand guesses or arbitrary adjustments.

It is no easy task to determine all the factors which will influence sales during a future period or to determine the extent of the influence of each factor. Experience, good judgment and some knowledge of statistical techniques are invaluable aids in the search for correct forecasts, but at times even a good measure of each of these qualities in the forecaster can be easily offset by some unpredictable condition or circumstance. This has been true during the past two years when various governmental measures influencing business have been put into effect without much, if any, advance warning. Certainly the most expert of individuals cannot predict phenomena of this sort. But now to turn to a consideration of some of the problems and methods involved in the determination, for a business concern, of the probable sales volume by products, salesmen, trading areas, branches and so on.

Problems in Sales Estimating

Shall the total sales of the company be derived first and then broken down into sales by products and by territories or salesmen? Shall the total sales figure for each product be derived first and

then broken down into sales by territories? Shall the sales figure be first derived for each territory and these figures then be totaled to arrive at the company figure? Shall the analysis be entirely a desk analysis or shall it be supplemented by current reports gathered in the field? Shall more weight be given to past trends or to current conditions or shall equal weight be given to each? These and similar questions which arise in connection with forecasting sales show both the great chance for differences of opinion and the great need for careful study. In general it can be said that there is no specific answer for each of these questions which will be correct at all times for all companies. Each case must be decided in the light of its own special conditions. Where there is uncertainty as to the more desirable of two methods to use, it is conservative and wise to employ both methods, each as a check on the other.

Methods of Forecasting Sales

When the budget figures for sales are arrived at by working "from the top down," one approach is to estimate the industry sales first and then to determine the portion of these sales which the individual company can expect to make. The industry sales are arrived at by determining as closely as possible the extent to which probable general business conditions will be likely to influence the demand for the industry's product. There are at least ways of trying to measure the influence of business conditions on industry sales, not all of which are available in every instance:

1. Plotting the curve of general business conditions and the industry curve over a period of years with a view to discovering any fixed relationship between the two. For example, it may be demonstrated from a study of this sort that when the index of general business is 20% above normal, the index of the company's sales is always 15% above normal. If the forecast of general business conditions for the period directly ahead is 20% above normal, the trend line for the industry can be projected and adjusted upward 15%. The same general procedure is often followed by projecting the trend line and then simply estimating what the effect of the forecasted general business conditions is likely to be; in other words, no attempt is made to discover any mathematical relationship existing constantly between the two curves. You will

find a complete description of this method of forecasting in an article by E. B. Whittemore in the N. A. C. A. Bulletin for September 1, 1934.

2. Discovering, if possible, a fixed lag between the movement of the general business or some other curve and the industry curve. If the former rises and falls a certain number of months before the latter, the method of forecasting is obvious. If some logical, casual relationship between the two movements exists, one can have more faith in the dependability of this method.

3. Finding some past period when the characteristics of the situation were analogous to the current ones; the assumption is then made that what happened previously following on these conditions will happen again. This is called the method of historical analogy.

4. Making a cross-cut analysis of all the factors influencing the curent situation and concluding from it what the effect on the industry is likely to be.

These and similar methods are more useful in indicating the direction of the trend than its extent. At times some of them are practically useless while at other times they may be very valuable. For the past two years, the last method has had particular merit. The prolonged depression has rendered most trend lines meaningless and frequent government action of one kind or another has had a decided influence on week-to-week and month-to-month business prospects.

Territory Potentials—Indices

Having determined the sales estimate for the total industry, one must next break it down into a figure for each of the territories covered by the individual company's salesmen. This is usually done by the use of the so-called market indices which measure the relative value of the various areas. The index for an area will in most cases be constructed with the aid of information available only on a county basis, the data for all the counties in the area or territory being combined to arrive at the desired area index. The task here is to select and weigh the available data which serve to measure the market for the company's or industry's product. For consumers' goods, the number of possible users will largely depend upon the amount of population, the desire to buy and the

ability to buy. The nature of the product involved will of course determine the weight to be given to each of these three factors. Population data are easily obtainable but to measure the other two factors requires the use of evidence of an indireet nature.

A worth while market index should be derived by employing data which seem to have some logical relationship to the buying habits and buying motives operative in connection with the purchase of the merchandise under consideration. At times, indices which are claimed to be useful are based upon factors which seem to break this rule. For example, an investigator has stated that the following factors have proven satisfactory in the construction of indices showing the potential market for dog foods: urban population, income tax returns, passenger cars in use and savings bank deposits. The data used for index construction should be readily available, up-to-date, accurate and should be selective enough to elimniate non-users. The following factors are among those most commonly used in the building of a market index:

Population
Population per square mile
Native white population
Number families
Number dwellings
Magazine circulation
Auto registrations
Telephone subscribers
Number of banks
Bank deposits
Retail sales
Number retail outlets
Number industrial establishments
Number wage earners
Wages paid
Value added by manufacture
Value of mineral products
Value of fishery products
Building permits
Income tax returns
Value of crops

Some of these factors are often refined to fit individual cases. For example, a manufacturer of women's shoes would not be interested in total population figures so much as he would be in, let us say, the number of native white, urban women over fourteen years of age. A manufacturer of accessories for Ford cars would obviously be interested in Ford car registrations rather than the registrations of all automobiles.

Weighting the Components of the Market Index

After having selected the proper components of an index, one has the additional task of deciding upon the weight to be assigned to each component. In general, population will be assigned relatively greater weight in an index measuring the potential market for staples and inexpensive goods than it will in an index measur-

ing the market for luxuries and expensive merchandise. The choice of weights is as important as the choice of factors; much research and good judgment are necessary in making the decisions in both cases. While ready-made indices are available and have been used with apparent success by many concerns, they should be employed only after their applicability to the situation in question is proven.

Once the index is established for a sales territory, it is of course an easy matter to set up the industry sales potential for this district by applying the index against the industry forecast for the entire country. The next step consists in estimating how much of this industry volume in each territory can reasonably be expected to come the way of the individual company, or, conversely, how much is likely to be secured by competitors. Past records will usually reveal that an individual company's sales have not followed closely the industry potentials. The State of New York, for example, may be expected according to the index, to take 25% of the industry sales. A company's sales may have fallen to only 10% within New York. In another territory, a situation directly the reverse may exist. The reasons for such disparities should be determined in an attempt to make every territory yield as great a proportion of the industry sales as possible. The territory which stands best relative to the total potential may be used as a standard, unless unusual and uncontrollable conditions make this unreasonable.

It should be borne in mind that a company will not ordinarily secure a far different percentage of industry sales in one year than in another. Competition will see to this. Optimistic forecasts based on new policies may be dangerous in that competitors may be making similar plans. For example, if a lower price for a product or several products is looked upon as a reason for a likely improvement in one's position in the industry, it should be remembered that competition will probably meet these price revisions. Unless the product is one for which the demand is exceedingly elastic, the individual company will then stand where it previously did as regards the percentage of the industry's units sold, and in a poorer position as regards the absolute volume of sales in dollars. At times, however, an improvement in the product, a new advertising appeal, a new form of compensation for the sales force, an additional service or some such change will draw a certain amount

of trade away from competitors. Market and sales analyses are important in bringing suggestions of this sort to light. If an actual test cannot be made to determine the effect of the change in a good sample of the market, the judgment of the company's executives will have to decide what the result will be.

Other Forecasting Methods

The method of arriving at sales estimates or quotas just described is really an ideal method which can seldom be carried out in practice because few industries have available the statistics of sales which form the starting point in the plan as outlined. Even in cases where an approximate industry sales figure is available, the procedure may vary from the foregoing in that the total company estimate will be arrived at before any consideration is given to territorial quotas. In such instances and also when the company sales are figured without any reference to industry sales, the breakdown by territories and other measures can be accomplished through the use of the market index. Tentative quotas arrived at in this way can be checked against tentative quotas arrived at by giving to each territory a quota representing the same percentage of forecasted total sales as last year's actual sales in the territory were of last year's actual total sales. By studying to determine the reasons for discrepancies in either direction, one can set quotas which are reasonable and useful; neither one of the methods by itself is likely to produce the most reliable and useful quotas.

Still another way, and probably the most popular, of determining forecasts and quotas is to build "from the bottom up." With this method, estimates of future sales for the various districts or territories are gathered from the sales force, branch managers or distributors. This is a simple way of determining quotas and has some merit. Contributors to the estimate have a close knowledge of the conditions in their territories. They are likely to cooperate better when they have something to do with making their own standards or goals. On the other hand, they are usually not in a position to estimate well the effect of changes in company policies on sales. They may be tempted to set too high a figure to get praise and avoid controversy, or to set too low a figure in order to be sure of surpassing it with actual sales. When this method is

used, the quota estimates will be reviewed in the home office, changed where deemed necessary, and then totaled to give the company's budget forecast. A variation of this "from the bottom up" method is that of having the home office assume the entire task of estimating as before, but this time by individual territories first, on the basis of past results and current conditions in each territory. The great value of using both the "from the top down" and "from the bottom up" methods and then reconciling them in what seems to be the most reasonable manner must be readily apparent.

After the company forecast and quotas are established for the period ahead, regardless of the method used, the next and simpler task is to break this down by weeks, months and quarters. Past records give the basis for this, with applications made through appropriate statistical methods. Of course, in the case of some merchandise, the seasonability of sales will not run the same in all territories. Finally we shall have for each product the forecasted sales by weeks and months for one year for each sales territory and for the country. For the same territories and periods, we can estimate *gross profit* because we know the price at which we will sell (it having been important in determining our sales forecasts) and the cost of the goods out of the factory. Similar estimates can be set up for distributors, branch houses and so on. Quotas or estimates will be set up wherever they will prove useful as standards or guides for determining the desirability of cultivating certain segments of the market and for judging the efficiency of sales methods or policies. Quotas may be set up in terms of units as well as dollars where this seems necessary. The unit basis is ordinarily much more important in connection with production quotas than with sales quotas.

Need for Selling Expense Forecast

As has been stressed before, quotas and forecasts are important in any attempt to control marketing activities and hence marketing costs. The usefulness, for this purpose, of figures for probable sales and gross profit is increased many fold, however, by the determination of another estimate—that for selling and distribution expenses. Marketing expense forecasts should be added to those already described in order to:

1. Provide a basis for judging the desirability of working a territory by indicating probable profit.
2. Show what the financial requirements of the company will be.
3. Afford a check for actual results, or in other words, a standard for control purposes.

Past experience is an excellent guide in setting sales expense forecasts just as it is in setting sales forecasts; but here, too, current conditions should be given fullest consideration. Of course, in estimating volume for each territory, there must have been considered a certain amount of sales activity (and expense) necessary to procure the business. The expenses incurred in connection with the securing and the filling of orders are, as is well known, direct and indirect in nature. Direct expenses are easy to allocate to the proper classification (product, territory, etc.), but indirect expenses give rise to considerable difference of opinion when the question of their proper allocation is raised. The cost accountant is usually much better fitted than the sales manager to answer such questions.

Use of Sales and Expense Forecasts

Once the expense estimates have been set up and combined with the various types of sales quotas and gross margin estimates, profitability by lines, salesmen, branches and so on, and for time periods, is automatically determined. By inspecting the combined budget, one can find out where quotas or expenses should be revised by a change in sales policies or methods. Taking off a salesman in a particular territory may mean a drop in sales but at the same time an increase in profit. An increase in expense at some point may mean a profitable increase in sales. At times it may be possible to revise the mixture, that is, the relative proportions of the different lines as regards gross margin, so that with greater sales of long-profit items, a net profit, rather than a loss, will result.

Finally, after being carefully combed over, the sales budget will be established with all the figures composing it serving as standards or guide posts for the partial control of marketing activities and hence marketing costs. As the budget period advances, actual results will be compared with the budget broken down into weekly, monthly and quarterly sections. Where actual figures differ from the budget figures, steps can be taken to correct any discoverable faulty situation or improve upon any seemingly unfavorable situa-

tion by changing policies or methods and, in this way, increase profit or decrease loss. The cause of discrepancies can be sought, and, where found, eliminated. At this point the danger of using ratios of sales expense to sales in determining estimates or in comparing actual with budget, should be emphasized. The percentage of expense to sales is not constant for all volumes.

Standards for Marketing Costs Desirable

Where budget or aggregate standards only are used for controlling selling and distribution expenses, it may be difficult to fix responsibility for any discrepancy between the actual and budgeted figures. For this reason, increasing attention is being given to the possibility of using an additional, or supplementary, type of standard which has been rather widely employed for some time in connection with the control of manufacturing expenses. It is felt that it is wise not only to set up an aggregate amount which will be spent for a given function but also to establish a per unit allowance for the performance of those functions for which some unit of measurement can be selected. The fact is that once such a measure has been selected for a function or activity and a unit cost, usually referred to as a standard cost, has been established, the aggregate amount budgeted for this activity will be set with a greater degree of accuracy.

Under a system where this new type of standard, the unit cost, is used, variations from a budgeted figure can be investigated to see the extent to which the variation is due to a change in the number of planned functional units and the extent to which it is due to a change in the planned cost of each unit. In this way, the relative efficiency with which a function is being performed can be determined; in other words, the opportunity for control is greater than would otherwise be the case.

Steps in Setting Standards for Distribution Costs

The steps in setting up a standard for the control of marketing activities and costs through the use of unit standards costs are:

1. Grouping of the past year's expenses according to the activity for which they were incurred; this functional grouping or classification of expenses (at least according to major functions) is probably used by the majority of concerns today. Often the selection

of functions will be influenced by the possibility of finding some unit of measurement which directly determines their total cost. The accounting system should be made to segregate the costs of each function.

2. Selecting the unit which will be used to measure the amount of functional or activity service given during the past year and to be given in future periods. For each function, that unit will be selected which determines, according to the number of them used, the total functional costs. Of course, one unit may be used as a measure for for two or more functions. Some of the possible measures for use in connection with particular functional factors are:

a. Number of units of product sold
b. Number of units of product shipped
c. Number of salesmen's call
d. Number of days of travel
e. Number of miles traveled
f. Number of collections
g. Number of orders
h. Number of invoices
i. Number of accounts
j. Number of items per invoice or order
k. Number of weight miles
l. Number of advertising solicitations.

The number of units represented by each of the past year's functional activities will now be ascertained. (Of course, if it will be helpful, the figures for several years past can be assembled.)

3. Dividing each total functional cost for last year by the number of units to get at the unit cost incurred in that year. Last year's units and costs are used as a basis for deciding upon similar figures for the period ahead. The figures for the two periods may differ widely, those for the past year merely affording a starting point for determining what those for the coming period are likely to be, in the light of probable conditions.

4. Multiplying the expected number of units of service which will be necessary under the program for the period ahead by the standard unit cost of this service and arriving at the total expected or budgeted cost. In this way the *budget* standard is arrived at through the use of the unit and the unit cost or standard.

When the actual number of units necessary and the actual costs by functions are finally available, it will be possible to ascertain whether any discrepancy between actual and budgeted cost is at-

tributable to a variation from the predicted number of units or a variation from the standard cost, or both. It may be that a considerable change in the volume of units should mean an allowable cost different from the standard. This must be taken into account if the truly controllable expense variation is to be derived; an example showing this fact is given toward the end of this paper. For the moment, it is well to note that where large fluctuations in volume of units is likely to occur in connection with the performance of any function, a flexible budget showing the costs at various volume levels is desirable.

Meaning of "Standards"

It may be well at this point to say a word or two regarding the type of standard we have had in mind in the discussion immediately preceding, since there is by no means unanimity of opinion as to just what "standards" are and how they should be used. There are some who figure the standard cost as an average of past costs. Others look upon standard costs as representing an ideal performance, one which should be the ultimate object of attainment. Still others, and this is the point of view in this discussion, consider standards as the desirable and reasonable costs to be sought for during a forthcoming period. Looked at in this way, standard costs tie in directly with the budget, as has been pointed out.

We have decided to use the latter type of standard because it appears to serve adequately the purpose we have in mind—that of affording a means for controlling marketing costs. By considering past accomplishments and probable future conditions, internal and external, we can forecast that level of performance, set up those standards, which we can reasonably expect to attain. Where actual results vary from these standards, under the plan we are now suggesting, we can tell to what extent the variance is due to changes in volume, which often are not controllable, and the extent to which the variance is due to the rate or unit cost, which is often controllable. Investigation may show good cause for a variation of the actual from the standard rate but where there is no such good cause, steps may be taken to improve the situation .

An Illustration

In the example following, the figures are for a year. Actually, the figures would be determined for much shorter periods at

the end of which a check could be made to insure that actual results approach as nearly as possible the standards previously established. Also it should be noted that the figures are for control purposes only and cannot be used for costing in such a way that profit by products, territories, etc., can be determined. This is so because no attempt has been made to introduce burden charges into the computations. It is possible, and ordinarily undoubtedly desirable, to use standards which are useful both for determining profits and for controlling expenses (increasing efficiency); but as we are now considering only the ways in which costs can be controlled, we need not discuss the problem of the proper apportionment of burden. In using only the expenses which can be directly allocated to each activity, we are considering the ones which are likely to vary and therefore need to be controlled.

We will illustrate the value of functional service standards by referring to the case of a company selling five lines of products:

1. Small rivets
2. Large rivets
3. Nails
4. Wire
5. Miscellaneous—clevis pins, burrs, cold drawn steel.

Some of these products are stocked, while others are made only on order; so that we can divide the products into two classifications—(1) stock and (2) special.

Sales Outlets

The company sells through two types of offices: "outside" and "commission." The home office can be considered as an "outside" office since part of its functions duplicate those of other offices; other outside offices are located at St. Louis, Indianapolis, Cleveland, Chicago, Detroit and Philadelphia. These offices are owned and operated by the company and have the usual expenses—salaries (managerial, sales force and stenographic), rent, telephone, light, etc. The work of the company's salesmen is really promotional rather than the aggressive solicitation of orders. They cover their routes regularly, taking orders whenever the customer happens to be desirous of placing them. Prices are theoretically fixed, but a salesman may change them for good cause—competition, equalization of freight charges, and so on. For large cuts in

price, however, he must have the authorization of the home office. Since the price cut is made by increasing the discount, not by lowering the list, an opportunity for control is offered through the comparison of actual discounts with the fixed discounts. Where a salesman has too wide a divergence between the discounts he allows and those established by the company, the reasons for this divergence can be investigated. In other words, a type of standard is available here.

Commission offices are owned and operated independently of the company; they are located in Boston, New York, Atlanta, Chattanooga, Kansas City, Seattle, Buffalo, San Francisco and Los Angeles. These offices handle the company's line exclusively and are paid on a commission basis. The desirability of changing from commission to outside offices and vice versa is continually tested by attempting to determine what the net return to the company would be by operating each office on the other basis.

The market for the company's products is horizontal, numbering approximately 5,000 customers. Many of these customers are sold on a contractual basis.

Functional Service Activities and Units for Control

The marketing functional service activities of the company, the cost of which we want to control, will be enumerated presently. It should be pointed out first that this list consists of main office activities with the exception of "sales compensation" and "sales travel," against which are placed the expenses of one salesman operating out of one outside office. Total sales compensation and sales travel figures for the company can be handled in the same way. The marketing activities of the company, together with a brief statement (in parentheses) of their nature and the unit which it is proposed to use in measuring them are:

	Activity	*Unit*
1.	Keeping current sales records (Making order entries, giving quotations, noting contract figures, entering salesmen's calls)	Number of entries
2.	Keeping permanent sales records (Summarizing total business for each customer by years.)	Number of entries
3a.	Sales promotion—searching (Looking for new customers and studying records of past customers.)	Fixed amount

Activity	*Unit*
3b. Sales promotion—letter writing (Writing to customers to get estimates of future business, contacting small or inaccessible accounts, writing to non- and past customers, preparing contracts.)	Number of letters
4a. and 4b. Entering orders (Translating orders—stock and special—into plant terms, entering orders by lines. In each case, heading has to be entered and also a certain number of items which we shall call an average of five.)	4a. Number of orders 4b. Number of items
5. Allocating stock (Concerned solely with stock orders; allocated orders for immediate or deferred shipment; inventory control.)	Number of items (Fewer than "4b" above because only stock orders)
6a. Warehousing—assembly (Gathering for orders.)	Number 100 lbs.
6b. Warehousing—traffic (Looking up rates, methods, etc.)	Number of orders
6c. Warehousing—bills of lading (Making out bills of lading.)	Number of shipments
7. Invoicing (Making out invoices.)	Number of items
8. Shipment service (Answering inquiries as to date of shipment, fact of shipment, etc.)	Number of inquiries
9a. Accounting—posting debits	Number of shipments
9b. Accounting—statements and entering cash (Making out statements and entering cash receipts.)	Number of accounts
9c. Accounting—calculating agents' commissions (Commissions on home office sales also figured for comparison purposes.)	Number of shipments
10. Credit—usual services (Of course all orders do not require credit investigation. However, since those that do bear a constant relationship to those which do not, the total number of orders can be used as the measure. The procedure would have to be different if we were also interested in costing, to determine profitability.)	Number of orders
11. Collections—usual services	Number of accounts
12. Sales compensation (For one man, as example of method.)	Number of calls
13. Sales travel (One man, as example.)	Number of miles
14. Supervision (Salaries of Vice President in charge of sales, of the 5 divisional sales managers and of the 5 stenographers.)	Fixed amount
15. Advertising (Trade papers, catalogues and price lists.)	Fixed amount

Exhibit 1 at the end of this article shows the number of units of functional activity, the total cost of the activity and the unit cost of the activity in 1934. (Actual figures are not used.)

Exhibit 2 shows the estimated number of units of functional activity, the unit cost of the activity and the total cost of the activity for the year 1935. These figures do not differ much from 1934 because it is thought that business conditions will not vary much between the two years and no radical changes are to be made in internal methods of operation .

Exhibit 3 shows the hypothetical results for 1935 under the same heads as appear in the two preceding exhibits.

Exhibit 4 shows how the hypothetical results for 1935 compare with the budgeted figures and the extent to which the excess or saving is due to volume and the extent to which it is due to a variation from the unit rate. In arriving at the latter figures, the following formulae were used:

Volume variance equals (actual quantity) (standard rate) minus (standard quantity) (standard rate).

Rate variance equals (actual quantity) (actual rate) minus (actual quantity) (standard rate).

In this example, the actual and the budget undoubtedly agree much more closely than would many times be the case; therefore the necessity for this type of standard control is not so pointed as would be the case with a wider divergence between budget and actual.

It should be emphasized that the unit cost for different volumes should be estimated where widely fluctuating volumes may occur and where burden is included in the costs, if any variation is to be attributed to the proper cause. The following example will illustrate this. Assume the estimated number of salesmen's calls is 1,600 and the estimated unit or standard cost is $2.82, making a total budget figure of $4,512. Now let us assume that the actual results are 2,000 calls—total cost $5,000, unit cost $2.50. Following the procedure used above, we would find that the excess of actual over estimated of $488 is due plus $1,128 to quantity and minus $640 to the rate. This would seem to imply a handsome saving due to efficiency. However, if we had set up a flexible budget in which 2,000 calls would be estimated to cost $2.40

each, or a total of $4,800, we see immediately that this total is $200 over what it should be, or 10 cents a unit, presumably an amount which is controllable. We have, in other words, really been inefficient rather than efficient as the first computation would lead us to believe. The importance of the flexible budget in such instances is thus demonstrated: in our example, the fact that burden is not included in our figures makes such a budget unnecessary. When we multiply the actual volume by the standard rate we really get the flexible budget figure.

In this paper I have tried to point out some of the ways in which marketing costs are controlled through the use of standards. All the possible methods of securing such control have by no means been mentioned; lengthy papers, for example, could be written about various uses of standards as bases for salesmen's compensation and for determining the efficacy of advertising expenditures. Nor has any one of the control methods included in the foregoing exposition been thoroughly treated; over-simplificatoin has been necessary because of time limitations. However, it is hoped that this outline will prove of some value in suggesting possibilities for improved control of marketing costs. Certainly there is an opportunity for extensive research along this line and, it would seem, a promise of real rewards.

EXHIBIT 1

(Actual—year 1934)

Activity	*(Unit)*	*No. units*	*Total cost*	*Unit cost*
Current sales record	(entry)	112,000	$ 5,600	$0.05
Permanent sales record	(entry)	5,000	500	.10
Sales promotion—				
Searching	(fixed amount)	.....	6,000	....
Letter writing	(letter)	24,000	6,000	.25
Entering orders—				
Headings	(order)	60,000	7,200	.12
Items	(item)	300,000	7,500	.025
Allocating stock	(item)	200,000	4,200	.021
Warehousing—				
Assembly	(100 lbs.)	1,200,000	30,000	.025
Traffic	(order)	60,000	3,000	.05
Bills of lading	(shipment)	80,000	2,520	.0315
Invoicing	(item)	360,000	12,600	.035
Shipment service	(inquiry)	15,000	4,050	.27
Accounting—				
Posting debits	(shipment)	80,000	2,720	.034
Statements and cash	(account)	5,000	4,000	.80
Agents' commissions	(shipment)	80,000	1,000	.0125
Credit	(order)	60,000	3,000	.05
Collections	(account)	5,000	5,000	1.00
Sales compensation	(call)	1,500	4,500	3.00
Sales travel	(mile)	12,000	2,400	.20
Supervision	(fixed amount)	.....	49,000	....
Advertising	(fixed amount)	.....	5,224	....
		TOTAL	$166,014	

EXHIBIT 2

(Budget—year 1935)

Activity	*No. units*	*Unit cost*	*Total cost*
Current sales record	112,500	$0.0498	$ 5,602.50
Permanent sales record	5,250	.10	525.00
Sales promotion—			
Searching	.....	....	6,000.00
Letter writing	25,000	.24	6,000.00
Entering orders—			
Headings	60,250	.12	7,230.00
Items	301,250	.025	7,531.25
Allocating stock	201,000	.021	4,221.00
Warehousing—			
Assembly	1,205,000	.024	28,920.00
Traffic	60,250	.05	3,012.50
Bills of lading	80,100	.0315	2,523.15
Invoicing	360,300	.035	12,610.00
Shipment service	15,200	.27	4,104.00
Accounting—			
Posting debits	80,100	.034	2,723.40
Statements and cash receipts	5,250	.78	4,095.00
Figuring agents' commissions	80,100	.0125	1,001.25
Credit	60,250	.05	3,012.50
Collections	5,250	.9524	5,000.10
Sales compensation	1,600	2.82	4,512.00
Sales travel	12,500	.20	2,500.00
Supervision	.....	....	49,000.00
Advertising	.....	....	5,224.00
		TOTAL	$165,347.65

EXHIBIT 3

(Hypothetical—year 1935)

Activity	*No. units*	*Unit cost*	*Total cost*
Current sales record	112,350	$0.053	$ 5,954.55
Permanent sales record	5,150	.093	478.95
Sales promotion—			
Searching	.....	....	6,000.00
Letter writing	25,100	.231	5,800.00
Entering orders—			
Headings	60,200	.1196	7,200.00
Items	301,000	.0239	7,193.90
Allocating stock	200,500	.0216	4,350.00
Warehousing—			
Assembly	1,202,000	.0241	29,000.00
Traffic	60,200	.049	2,950.00
Bills of lading	80,050	.032	2,561.60
Invoicing	360,200	.035	12,700.00
Shipment service	15,400	.273	4,200.00
Accounting—			
Posting debits	80,050	.0343	2,750.00
Statements and cash receipts	5,150	.80	4,120.00
Figuring agents' commissions	80,050	.0137	1,100.00
Credit	60,200	.0515	3,100.00
Collections	5,150	1.009	5,200.00
Sales compensation	1,575	2.92	4,600.00
Sales travel	12,400	.209	2,600.00
Supervision	.....	....	49,000.00
Advertising	.....	....	5,224.00
		TOTAL	$166,083.00

EXHIBIT 4

(Hypothetical compared with budget—year 1935)

Activity	*Actual over or under budget**	*Excess or saving due to*	
		*Units**	*Cost**
Current sales record	$352.05	—$ 7.47	$ 359.52
Permanent sales record	—46.05	—10.00	—36.05
Sales promotion			
Searching	0.00	.....	.....
Letter writing	—200.00	24.00	—224.00
Entering orders—			
Headings	—30.00	—6.00	—24.00
Items	—337.35	—6.25	—331.10
Allocating stock	129.00	—10.50	139.50
Warehousing			
Assembly	80.00	—72.00	152.00
Traffic	—62.50	—2.50	—60.00
Bills of lading	38.45	—1.57	40.02
Invoicing	90.00	—3.00	93.00
Shipment service	96.00	54.00	42.00
Accounting—			
Posting debits	26.60	—1.70	28.30
Statements and cash receipts	25.00	—78.00	103.00
Figuring agents' commissions	98.75	—0.62	99.37
Credit	87.50	—2.50	90.00
Collections	199.90	—95.24	295.14
Sales compensation	88.00	—70.50	158.50
Sales travel	100.00	—20.00	120.00
Advertising	0.00		
	$735.35	—$309.85	$1,045.20

* Where no sign is used, a plus quantity is understood.

CONTROL AND DISTRIBUTION OF SELLING COSTS

By Walter F. Titus, Assistant to the President, International Business Machines Corp., Endicott, N. Y.

SELLING cost is a great deal like the weather we have been having recently around New York. Everybody is complaining about it but nobody is doing anything.

There are many aspects of distribution costs which might be discussed. We might consider the costs of distribution from the social viewpoint. The spark plug that costs 11¢ to make and sells for 75¢ with the manufacturer making a 3¢ profit is an example. In many businesses the cost of distribution is equal to the manufacturing cost, and in some businesses it costs twice and three times as much to sell an article as to make it. But spending time on that subject is useless. We recognize that selling costs are too high and are getting higher all the time, and that distribution wastes exist and must be eliminated. But as accountants the primary concern of members of this Association is with the control of the selling costs of the individual concerns with which you are associated.

What Is Control?

Control means *government—direction—determination.* It means *discrimination—selection:*

1. As to the method of marketing to be employed.
2. As to geographical coverage.
3. As to what type of advertising is to be used.
4. As to the selection, training, promoting and firing of salesmen.
5. As to what types of products are to be added or dropped.
6. As to what kinds of business are to be served.

This is a problem that demands *thinking* and no machine has yet been built that can think. What we must do is to recognize each factor at its true value and then attempt to correlate these values. But this is a very difficult thing because we are not familiar with the factors and it seems proper that we should first attempt to recognize each factor and do something about it now than to await the day when some happy method of correlating all factors can be reached.

Does Problem Differ from that of Allocating Manufacturing Burden?

The problem is often attacked by recalling the situation in regard to manufacturing costs of 30 years ago, and suggesting that the accountant of that day was as bewildered by the problem of the application of overhead to his costs as is the present day accountant in applying selling costs. It is pointed out that he solved this problem, and that the application of the same principles should result in the solution of the problem of distributing selling costs. I am not so sure that every phase of burden distribution has been solved, because I have yet to find the right way to distribute heat treating and plating overheads. There is no doubt but that manufacturing burden is more intelligently handled today than ever before; but the fact that present day methods are not perfect after 30 years of effort may lend us strength as we seek for a way of allocating selling costs which will be better than we have now, even though not perfect.

I wonder if the problems of distributing manufacturing burden and of distributing selling costs are really similar. In manufacturing we know that if we put enough power into a machine we can get definite results out of that machine; at least the results are definite between well understood and fairly close limits. But if you have been a salesman, as I have, you know that there are times when no given amount of power applied to a prospect can get any kind of an order, except the order to "get out." Where in manufacturing our variables are limited, in selling they are almost unlimited. Therefore, it seems that the difficulty of establishing standards are also unlimited.

Problems in Setting Standards for Selling Costs

Suppose we start out to establish standards for selling costs. Upon what basis shall we arrive at these standards? Shall we establish a standard for each class of goods we sell and apply that standard on a dollar basis, thus assuring ourselves that it costs a thousand times as much to sell a $5,000 order as to sell a $5 order? Shall we have to assume that the best salesman on our force is responsible for the greatest cost of selling goods when we know the opposite to be true? Shall we assess each order, regard-

less of size, with an amount for selling costs determined by dividing total selling costs by the number of orders. That might be fairer than the dollar basis, but it is open to the same criticism in that a certain salesman would be over-assessed or that a certain product would be made to carry an undue share of selling costs. Shall we assess sales burden by districts or territories, with a different burden rate for each territory? And if we do, shall we do it on a dollar basis? These are some of the questions which need to be answered in any serious effort to control and properly allocate selling costs.

Purpose in Making Distribution Should Be Clearly Understood

This brings us the question as to what we are trying to do in distributing sales expense. Are we viewing it in the nature of a tax? Do we think we must simply find some way to get rid of it and that the best way is to distribute it on a dollar basis? Or should we think of sales expense somewhat as we think of development expense? If we start to develop a machine and our laboratory spends $10,000 on it before discovering that it is no good, or our patent department finds that someone else has beaten us to it, what do we do? Do we capitalize that $10,000? No! Do you charge it to the cost of developing another machine which comes through the laboratory successfully? No! We charge it off. Now isn't there something in this for us to think about?

Why is it that sales managers spend so much time analyzing what their salesmen do and so little time analyzing what their salesmen don't do? It is a rare salesman who can spend 20% of his time in doing work that gets an order before he leaves. Yet the sales manager spends his time analyzing and re-analyzing his men's successes and thinks he learns about their failures by deduction.

If it costs $20 a day to maintain a salesman and he makes ten calls a day and sells three orders, does it make sense to charge those orders with $10 apiece or $2 apiece?

Why Not Job Order Selling Costs?

We've all heard that the job order cost method is as dead as the dodo bird. I'm not so sure but what it should be resurrected and used as the basis for the distributoin of selling costs.

It seems fairly logical to have a salesman make out a job ticket for Prospect No. 47144 and to show his working time. At the end of each month it would be simple to add up the total working hours of all salesmen and to spread the supervisory expense to each job ticket. And it would also be easy to take the salesmen's compensation and expenses and determine his own expense for each job. And it is conceivable that advertising expense could be split the same way, it being assumed that the salesmen are routed by the sales manager to the points where the sales manager had expected the advertising to do the most good.

At the end of every month then we have a job order cost by prospects. We debit each job with the direct and prorated costs and credit it with gross profit on shipments made. Of course there are many jobs to which no credit is ever entered.

All of this is preliminary to control. The sales manager now has all the facts in front of him and the facts are cumulative. He can study these facts any way he wants to. He can determine to do or not to do business in this or that territory or with this or that class of business, or to keep or fire this or that salesman, and the chances are that he will be more nearly right than he is today.

Accounting for Unproductive Sales Effort

Under this job order cost plan it is easy to ask the question "What are you going to do with the 75 per cent of your sales expense which has not resulted in sales?" The answer might well be "What do you do with the labor that goes into the manufacture of parts which are later scrapped?" Or, "What do you do about inventory that ought to be in the bins but isn't there?" Of course it is conservative to say that we must charge it to "Loss Due to Sales Operations" in the month in which it occurs and later salvage some of it from this account.

There are as good arguments for deferring part of this cost as an asset as there are for deferring advertising campaign expense. I do not propose to go into any discussion on this point. What I am interested in is the recognition of facts. If a salesman spends three-fourths of his time not getting orders, he may be building up good will and it may be more sensible to capitalize such good will than to use the empirical figure of $1 of $5,000,000 we usually see on balance sheets. This three-fourths of his time

and presumably three-fourths of his supervision and three-fourths of the advertising expense can not rightfully be charged to what he did in the one-fourth of his time which he actually spent in getting orders. If you want to charge it in as a separate burden, I see no reason why you should not, but let us recognize it for what it is.

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